

SEQUENCE LISTING

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Schwartz, John
Das Gupta, Ruchira

<120> Engineered Stimulus-Responsive Switches

<130> DNV-003

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<160> 20

<170> PatentIn version 3.0

<210> 1
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Zinc finger consensus sequence

<220>
<221> misc_feature
<222> (2)..(3)
<223> wherein Xaa at positions 2, 3 can be any amino acid

<220>
<221> misc_feature
<222> (5)..(7)
<223> wherein Xaa at positions 5, 6, 7 can be any amino acid

<220>
<221> misc_feature
<222> (9)..(13)
<223> wherein Xaa at positions 9, 10, 11, 12, 13 can be any amino acid

<220>
<221> misc_feature
<222> (15)..(16)
<223> wherein Xaa at positions 15, 16 can be any amino acid

<220>
<221> misc_feature
<222> (18)..(20)
<223> wherein Xaa at positions 18, 19, 20 can be any amino acid

<400> 1
Cys Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa
1 5 10 15

His Xaa Xaa Xaa His
20

<210> 2
<211> 22
<212> PRT
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<220>
<223> Zinc finger consensus sequence

<220>
<221> misc_feature
<222> (2)..(4)
<223> wherein Xaa at positions 2, 3, 4 can be any amino acid

<220>
<221> misc_feature
<222> (6)..(8)
<223> wherein Xaa at positions 6, 7, 8 can be any amino acid

<220>
<221> misc_feature
<222> (10)..(14)
<223> wherein Xaa at positions 10, 11, 12, 13, 14 can be any amino acid

<220>
<221> misc_feature
<222> (16)..(17)
<223> wherein Xaa at positions 16, 17 can be any amino acid

<220>
<221> misc_feature
<222> (19)..(21)
<223> wherein Xaa at positions 19, 20, 21 can be any amino acid

<400> 2
Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Leu Xaa
1 5 10 15

Xaa His Xaa Xaa Xaa His
20

<210> 3
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> Zinc finger consensus sequence

<220>
<221> misc_feature
<222> (2)..(5)
<223> wherein Xaa at positions 2, 3, 4, 5 can be any amino acid

<220>
<221> misc_feature

<222> (7)..(9)
<223> wherein Xaa at positions 7, 8, 9 can be any amino acid

<220>
<221> misc_feature
<222> (11)..(15)
<223> wherein Xaa at positions 11, 12, 13, 14, 15 can be any amino acid

<220>
<221> misc_feature
<222> (17)..(18)
<223> wherein Xaa at positions 17, 18 can be any amino acid

<220>
<221> misc_feature
<222> (20)..(22)
<223> wherein Xaa at positions 20, 21, 22 can be any amino acid

<400> 3
Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Leu
1 5 10 15

Xaa Xaa His Xaa Xaa Xaa His
20

<210> 4
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Zinc finger consensus sequence

<220>
<221> misc_feature
<222> (2)..(3)
<223> wherein Xaa at positions 2, 3 can be any amino acid

<220>
<221> misc_feature
<222> (4)..(16)
<223> wherein Xaa at positions 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,
16, 17 can be any amino acid

<220>
<221> misc_feature
<223> wherein Xaa at positions 19, 20 can be any amino acid

<400> 4
Cys Xaa Xaa Cys Xaa
1 5 10 15

Xaa Cys Xaa Xaa Cys
20

<210> 5
<211> 7

<212> PRT
<213> Artificial Sequence

<220>
<223> target sequence for protein kinase A

<400> 5
Leu Arg Arg Ala Ser Leu Gly
1 5

<210> 6
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> substrate for casein kinase II

<400> 6
Arg Arg Arg Glu Glu Glu Thr Glu Glu Glu
1 5 10

<210> 7
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> substrate sequence for v-Abl tyrosine kinase

<400> 7
Glu Ala Ile Tyr Ala Ala Pro Phe Ala Lys Lys Lys
1 5 10

<210> 8
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for leucine zipper motif

<400> 8
atcgcgacata gaaacaaact tgaagac

27

<210> 9
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for leucine zipper motif

<400> 9
tcagcggtcg ccaactaatt tc

22

<210> 10		
<211> 26		
<212> DNA		
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<220>		
<223> primer for lambda repressor		
<400> 10		
atgagcacaa aaaagaaaacc attaac	26	
<210> 11		
<211> 18		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> primer for lambda repressor		
<400> 11		
gcttacccag cgctccgc	18	
<210> 12		
<211> 504		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> cI-bZIP repressor variant		
<400> 12		
atgagcacaa aaaagaaaacc attaacacaa gagcagcttg aggacgcacg tcgccttaaa	60	
gcaatttatg aaaaaaaagaa aaatgaactt ggcttatccc aggaatctgt cgccagacaag	120	
atggggatgg ggcagtcagg ctgggtgct ttatataatg gcatcaatgc attaaatgct	180	
tataacgccc cattgcttac aaaaattctc aaagtttagcg ttgaagaatt tagcccttca	240	
atcgccagag aaatctacga gatgtatgaa gcggtagta tgcagccgtc acttagaagt	300	
gagttatgagt accctgtttt ttctcatgtt caggcaggga tggcttcacc taagcttaga	360	
acctttacca aaggtgatgc ggagcgctgg gtaagcatcg cgcacatgaa acaacttgaa	420	
gacaagggttg aagaattgct ttgcaaaaat tatcacttgg aaaatgaggt tgccagatta	480	
aagaaattag ttggcgaacg ctga	504	
<210> 13		
<211> 35		
<212> DNA		
<213> Artificial Sequence		

<220>
 <223> primer for coding sequence of a temperature sensitive form of
 the lambda repressor containing an AvaI sit

<400> 13
 ttacaacgccc cgggtcagcc aaacgtctct tcagg 35

<210> 14
 <211> 71
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for the coding sequence of a temperature sensitive form
 of lambda repressor

<400> 14
 atgggcattt ttcgagtca gccgggcat accccgcata cggcgccag cacaaaaaaag 60

aaaccattaa c 71

<210> 15
 <211> 784
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> TBD-cI repressor variant

<400> 15
 atgggcattt ttcgagtca gccgggcat accccgcata cattaacaca agagcagcac 60
 aaaaaagaaaa ccattaacac aagagcagct tgaggacgca cgtcgcctta aagcaattta 120
 tgaaaaaaaaa aaaaatgaac ttggcttatac ccaggaatct gtcgcagaca agatggggat 180
 ggggcagtca ggcgttggtg ctttatcaa tggcatcaat gcattaaatg cttataacgc 240
 cgcattgctt acaaaaattc tcaaagttag cgttgaagaa tttagccctt caatcgccag 300
 agaaatctac gagatgtatg aagcggttag tatgcagccg tcacttagaa gtgagttatga 360
 gtaccctgtt catcaccatc accatcaatt ttctcatgtt caggcaggga tgttctcacc 420
 taagcttaga acctttacca aaggtgatgc ggagagatgg gtaagcaca aaaaaaaagc 480
 cagtgattct gcattctggc ttgaggttga aggttaattcc atgaccgac caacaggctc 540
 caagccaagc tttcctgacg gaatgttaat tctcggttac cctgagcagg ctgttgagcc 600
 aggtgatttc tgcatagcca gacttgggg tgatgagttt accttcaaga aactgatcag 660
 ggatagcggt caggtgttt tacaaccact aaacccacag tacccaatga tcccatgcaa 720
 tgagagttgt tccgttgtgg ggaaagttat cgctagtcag tggcctgaag agacgtttgg 780
 ctga 784

<210> 16
 <211> 61
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer for coding sequence of a temperature sensitive form of lambda repressor

<400> 16
 atgggcattt tctcgagtca gcccggccat accccgcac cattaacaca agagcagctt 60
 g 61

<210> 17
 <211> 545
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> TBD-cI-bZIP repressor variant

<400> 17
 atgggcattt tctcgagtca gcccggccat accccgcac cattaacaca agagcagcac 60
 aaaaaagaaa ccattaacag gacgcacgac gccttaaaggc aatttatgaa aaaaaagaaaa 120
 atgaacttgg cttatcccag gaatctgtcg cagacaagat ggggatgggg cagtcaggcg 180
 ttggtgcttt attaatggc atcaatgcat taaatgctta taacgcccga ttgcttacaa 240
 aaattctcaa agtttagcggtt gaagaattta gcccttcaat cgccagagaa atctacgaga 300
 tgtatgaagc ggttagttagt cagccgtcac tttagaagtga gtatgagtac cctgttttt 360
 ctcatgttca ggcaggatg ttctcaccta agcttagaac cttagccaaa ggtgatgcgg 420
 agcgctgggt aagcatcgcg cacatgaaac aacttgaaga caaggttggaa gaattgcttt 480
 cgaaaaattt tcacttggaa aatgaggatg ccagattaaa gaaatttagtt ggccaaacgct 540
 ga 542

<210> 18
 <211> 525
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> TBP-cI-bZIP repressor variant with a deletion

<400> 18
 atgggcattt tctcgagtca gcccggccat accccgcac cattaacaca agagcagctt 60
 gaggacgcac gtcgccttaa agcaatttt gaaaaaaaaaaga aaaatgaact tggcttatcc 120
 caggaatctg tcgcagacaa gatggggatg gggcagtcag gcgttgggc tttatataat 180

ggcatcaatg cattaaatgc ttataacgcc gcattgctta caaaaattct caaagttgc 240
gttgaagaat ttagcccttc aatcgccaga gaaatctacg agatgtatga agcggttagt 300
atgcagccgt cacttagaag tgagtatgag taccctgttt tttctcatgt tcaggcaggg 360
atgttctcac ctaagcttag aacctttacc aaaggtgatg cggagcgctg ggtaagcatc 420
gcgcacatga aacaacttga agacaagggtt gaagaattgc tttcgaaaaa ttatcacttg 480
gaaaatgagg ttgccagatt aaagaaatta gttggcgaac gctga 525

<210> 19
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> primer containing sequence for a weak constitutive tetracycline resistance promoter

<400> 19
gtttgacagc ttatcatcga atagctttaa tgcgctagct agacaagtac tc 52

<210> 20
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> primer containing sequence for a weak constitutive tetracycline resistance promoter

<400> 20
gagtacttgt ctagctagcg cattaaagct attcgatgtat aagctgtcaa ac 52